

of course, be readily conceded as an article of broadmindedness; meanwhile we must wait for a specific case where it can be shown that males and females may be turned out in these different ways. For, while no one doubts that such things as blue flowers, let us say, may be due to different pigments that go back in origin to different factors, yet so far as known to the reviewer there is no case in the whole Mendelian literature where it has been *proved* that the same (not merely similar) product is the result of different factors.

A somewhat similar question comes up in connection with certain attempts that have been made to account for departures in the sex ratio on the basis that the sex factor has become "weakened." The result would lead to complete mix-up of the chromosome relations and would lead to chaos in subsequent generations if the same kind of "weakness" kept up. In contrast to such speculations the relative constancy of the chromosome number must appear an impressive fact. Doncaster himself, while lending a sympathetic ear to those who find difficulties in applying the chromosome interpretation to sex determination, takes in general the stand with which most of us will heartily agree, namely, to hold fast to what has been most clearly demonstrated and not let the fact that there are still unsolved problems confuse the issue. Progress in the difficult field of biological research seems to start from those points where the situation is clear. The ever-present attempts of the obscurantist to befog the issue by over emphasizing what is not understood is a procedure too familiar to call for more than passing comment. Doncaster's book will therefore serve to give balance to the situation that is "developing normally."

There are few minor points in the book that call for comment. The author has, on the whole, most judiciously assigned special discoveries to their authors without overburdening the text with names. The omission of Stevens's name on page 63 in connection with the discovery of the XY chromosomes in relation to sex determination is an oversight, but some fuller mention might have been ex-

pected in connection with the history of these chromosomes when much less important matters receive their historical setting.

T. H. MORGAN

COLUMBIA UNIVERSITY

The Butterfly Guide: a Pocket Manual for the Ready Identification of the Commoner Species found in the United States and Canada. By W. J. HOLLAND, LL.D. $3\frac{1}{2} \times 5\frac{3}{4}$ inches; pp. 237; 295 figures in color. Doubleday, Page & Co. Cloth. \$1.

Any guide book to the identification of 255 species of butterflies, that contains 295 finely colored figures, that costs only a dollar and actually does go into a vest pocket, may truthfully be called a great little book. This, in a few words, is a fair description of Dr. W. J. Holland's "Butterfly Guide." Apparently it is the first of its kind, and also the last word (and picture) in butterfly books for availability in the field and home.

The thirty-thousand-copy success of Dr. Holland's original "Butterfly Book" may justly be regarded as the inspiration for the present elegant booklet; and the author's point is well taken. This manual is built on the same general lines as Chester A. Reed's Pocket Bird Guide Series, and the "Birds of New Jersey." True enough, these volumes are none of them "reading books," and in the business of furnishing means to ends in identifying species they stick closely to their trails.

The purpose of this almost bewildering array of colored butterfly pictures is to promote identification of strange species, literally in a moment; and right well do they serve their purpose. Remembering as we do the breezy and rare freshness of the author's literary style, the only regret about this volume is that it does not and can not furnish room for unlimited Hollandesque gossip and disquisition on the more interesting species.

W. T. H.

SPECIAL ARTICLES

A NEW DISEASE OF GERMINATING WHEAT

WHILE examining some wheat fields on April 16 of this year it was noted that there was a